

WHAT IS CLAIMED IS:

1. A method for monitoring and reporting of communications line traffic information, the method comprising:

receiving real time line traffic resource utilization data from a switch;

estimating resource utilization at the switch, based on the line traffic resource utilization data that has been collected over a sample period of predetermined length, using a statistical estimation method so as to discount bursty utilization activity, thereby producing an estimated resource utilization calculation; and

publishing the estimated resource utilization calculation to an electronic publishing resource from which the published estimated resource utilization calculation is accessible by a subscriber.

2. The method for monitoring and reporting of communications line traffic information of claim 1, further comprising:

alerting the subscriber in the event that the estimated resource utilization calculation surpasses a predetermined threshold resource utilization condition.

3. The method for monitoring and reporting of communications line traffic information of claim 2, further comprising:

alerting the subscriber in the event that the estimated resource utilization calculation surpasses a predetermined number of threshold resource utilization conditions within a predetermined time period.

4. The method for monitoring and reporting of communications line traffic information of claim 2, wherein the alerting comprises an e-mail message.

5. The method for monitoring and reporting of communications line traffic information of claim 2, wherein the alerting comprises an audible alarm.

6. The method for monitoring and reporting of communications line traffic information of claim 2, wherein the alerting comprises posting an alert at a web site.

7. The method for monitoring and reporting of communications line traffic information of claim 1, wherein the sample period of predetermined length is within a range of about 20 minutes to about 90 minutes.

8. The method for monitoring and reporting of communications line traffic information of claim 7, wherein the sample period of predetermined length is about one hour.

9. The method for monitoring and reporting of communications line traffic information of claim 1, wherein the estimating is performed using an Erlang-B distribution formula.

10. The method for monitoring and reporting of communications line traffic information of claim 1, wherein the estimating is performed using a Poisson distribution formula.

11. The method for monitoring and reporting of communications line traffic information of claim 1, further comprising:

repeating the estimating and the publishing on a regular basis.

12. The method for monitoring and reporting of communications line traffic information of claim 11, further comprising:

compiling the repeated estimated resource utilization calculations into a database over a predetermined compiling time period.

13. The method for monitoring and reporting of communications line traffic information of claim 1, further comprising:

repeating the estimating and the publishing so as to provide estimated resource utilization calculations on a near real time basis for review by the subscriber.

14. The method for monitoring and reporting of communications line traffic information of claim 1, wherein the estimated resource utilization calculation is published so as to provide for ease of comprehension by technically diverse subscribers.

15. A method for monitoring and reporting of communications line traffic information, the method comprising:

receiving real time line traffic resource utilization data for a line set, said line set comprising one or more communications lines corresponding to a single subscriber;

estimating resource utilization for the line set, based on the line traffic resource utilization data that has been collected over a sample period of predetermined length, using a statistical estimation method so as to discount bursty utilization activity, thereby producing an estimated resource utilization calculation; and

publishing the estimated resource utilization calculation to an electronic publishing resource from which the published estimated resource utilization calculation is accessible by a subscriber.

16. The method for monitoring and reporting of communications line traffic information of claim 15, further comprising:

alerting the subscriber in the event that the estimated resource utilization calculation surpasses a predetermined threshold resource utilization condition.

17. The method for monitoring and reporting of communications line traffic information of claim 16, further comprising:

alerting the subscriber in the event that the estimated resource utilization calculation surpasses a predetermined combination of threshold resource utilization conditions within a predetermined time period.

18. The method for monitoring and reporting of communications line traffic information of claim 16, wherein the alerting comprises an e-mail message.

19. The method for monitoring and reporting of communications line traffic information of claim 16, wherein the alerting comprises an audible alarm.

20. The method for monitoring and reporting of communications line traffic information of claim 16, wherein the alerting comprises posting an alert at a web site.

21. The method for monitoring and reporting of communications line traffic information of claim 15, wherein the sample period of predetermined length is within a range of about 20 minutes to about 90 minutes.

22. The method for monitoring and reporting of communications line traffic information of claim 12, wherein the sample period of predetermined length is about one hour.

23. The method for monitoring and reporting of communications line traffic information of claim 15, wherein the estimating is performed using an Erlang-B distribution formula.

24. The method for monitoring and reporting of communications line traffic information of claim 15, wherein the estimating is performed using a Poisson distribution formula.

25. A traffic monitoring server system in electrical communication with one or more telecommunication switches and an open network, the system comprising:

one or more statistics relay servers receiving real time line traffic resource utilization data from the one or more switches, wherein the statistics relay servers process the received data, based on the line traffic resource utilization data that has been collected over a sample period of predetermined length, using a statistical estimation method so as to discount bursty utilization activity, to produce estimated resource utilization calculations for each of the switches; and

one or more information condensing servers receiving the estimated resource utilization calculations from the statistics relay servers via an intermediate network connection;

wherein the information condensing servers send graphical reports via the open network for review by a subscriber based on the estimated resource utilization calculations received from the statistics relay servers.

26. A traffic monitoring server system in electrical communication with a telecommunication switch and an open network, the system comprising:

one or more statistics relay servers receiving real time line traffic resource utilization data from one or more switches; and

one or more information condensing servers receiving the line traffic resource utilization data from the statistics relay servers, as relayed via an intermediate network connection, wherein the information condensing servers process the received data, based on the line traffic resource utilization data that has been collected over a sample period of predetermined length, using a statistical estimation method so as to discount bursty utilization activity, to produce estimated resource utilization calculations for each of the switches;

wherein the information condensing servers send graphical reports via the open network for review by a subscriber, based on the estimated resource utilization calculations.

27. A traffic monitoring server system in electrical communication with a telecommunication switch and an open network, the system comprising:



29. The traffic monitoring server system of claim 28, wherein a database is provided at the information condensing server that permits logging by authorized personnel of traffic utilization issues.

30. The traffic monitoring server system of claim 28, wherein the information condensing server is located remotely from the switch.

31. The traffic monitoring server system of claim 28, wherein the subscriber is free to view the graphical report at a location that is remote from the information condensing server.

32. A traffic monitoring server system in electrical communication with a telecommunication switch and an open network, the system comprising:

a statistics relay server receiving real time line traffic resource utilization data from the switch; and

an information condensing server receiving the line traffic resource utilization data from the statistics relay server, as relayed via an intermediate network connection;

wherein line traffic resource utilization data that has been collected over a sample period of predetermined length is processed, using a statistical estimation method so as to discount bursty utilization activity, to produce estimated resource utilization calculations for the switch; and

wherein the information condensing server sends a graphical report via the open network for review by a subscriber, based on the estimated resource utilization calculations.



33. The traffic monitoring server system of claim 32, wherein the processing of line traffic resource utilization data is implemented via the statistics relay server.

34. The traffic monitoring server system of claim 32, wherein the processing of line traffic resource utilization data is implemented via the information condensing server.

35. The traffic monitoring server system of claim 32, wherein the processing of line traffic resource utilization data is implemented via both the statistics relay server and the information condensing server.

36. A method for monitoring and reporting of communications line traffic information, the method comprising:

receiving line traffic resource utilization data from a switch;

collecting the received line traffic resource utilization data over a time period of predetermined length;

estimating resource utilization at the switch, based on the collected line resource utilization data, using a statistical estimation method so as to discount bursty utilization activity, thereby producing an estimated resource utilization calculation;

publishing the estimated resource utilization calculation to an electronic publishing resource from which the published estimated resource utilization calculation is accessible by a subscriber; and

repeating the receiving, the collecting, the estimating, and the publishing on a regular basis.

37. The method for monitoring and reporting of communications line traffic information of claim 36, the method further comprising:

- compiling the repeated estimated resource utilization calculations over a predetermined compiling time period;
- predicting resource utilization for a predetermined prediction time period; and
- publishing the resource utilization prediction to an electronic publishing resource from which the published resource utilization is accessible by the subscriber.

38. The method for monitoring and reporting of communications line traffic information of claim 37, wherein the predetermined prediction time period is about six weeks and wherein the predetermined compiling time period is about three weeks.

39. The method for monitoring and reporting of communications line traffic information of claim 36, further comprising:

- reporting the most utilized communications lines of the switch during peak periods of utilization; and
- reporting the most utilized communications lines of the switch on a current basis.

40. The method for monitoring and reporting of communications line traffic information of claim 39, wherein the number of communications lines reported as most utilized during peak periods is about twenty.

41. The method for monitoring and reporting of communications line traffic information of claim 39, wherein the reporting of the most utilized lines during peak periods is done by publishing at a web site.

42. The method for monitoring and reporting of communications line traffic information of claim 39, wherein the reporting of the most utilized lines during peak periods is done by publishing an e-mail message to the subscriber at predetermined time periods.

43. The method for monitoring and reporting of communications line traffic information of claim 39, wherein the reporting of the most utilized lines during peak periods is done by responding with an e-mail message to a subscriber demand for a list of the most utilized lines.